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EDITORIAL DEPARTMENT NOTE

These are busy days for the cost and industrial accountant. They are days of increased responsibilities and of a constant flow of new and interesting problems. More and more, management is coming to depend upon the skill and training of the industrial accountant to supply the facts as to past and present performance, to estimate the results of anticipated future steps and to chart the way through the transition period brought in by the New Deal.

To measure up to his new responsibilities the accountant needs a broad perspective. Not only must he have a firm foundation of technical skill in cost and general accounting, but he must also have the executive or administrative viewpoint toward the problems that surround him. If he has this he can make himself invaluable. Who better than the accountant can estimate the effect of various code provisions on costs of production and hence, in the long run, on prices? Who better than the accountant can estimate the effect of two alternative courses of action on costs, production and profits? In short, who is better qualified to advise and consult with management on the many important decisions that must of necessity be made during the period of transition? But his maximum usefulness can only be achieved if he is familiar with the problems of management and with the management viewpoint. It is for this reason that there is presented in this issue of the Bulletin two articles on present-day management problems.

The author of the first paper is Norris M. Perris, who is a graduate Mechanical Engineer and a former graduate student in the Economics and Business Science field at the University of Pennsylvania. Mr. Perris was in the Shop Engineering Department of the Manufacturing Division of the Aluminum Corporation until he was made Planning Supervisor for the Aberdeen Proving Grounds during the World War. He has served as Industrial Engineer for a number of corporations, has engaged in private industrial engineering practice and has taught Factory Management as a member of the faculty of the Wharton School of the University of Pennsylvania. For the last ten years Mr. Perris has been associated with Stevenson, Jordan and Harrison and, as a member of the firm, now supervises installations in the Eastern district. He is unusually well qualified to discuss "Today's Management Problems."

Our second paper on "Justifying Plant Investments" by David R. Anderson presents a suggested method for determining the justification for investments in plant and equipment under codes providing for the control of productive capacity. It illustrates a type of technique or method of analysis of value in dealing with the many problems of future action which the New Deal has invoked. Mr. Anderson is a graduate of the University of Pennsylvania. He has seven years' public accounting experience with the Philadelphia office of Lybrand, Ross Bros. & Montgomery and served for over two years as treasurer and secretary of the Wilbur Suchard Chocolate Company, Inc., in Philadelphia. Since 1929 he has been assistant treasurer and chief accountant of The Kendall Company whose general offices are in Walpole, Mass. Mr. Anderson is a certified public accountant under the laws of the State of Pennsylvania. In addition to his membership in the N. A. C. A. he is also a member of the American Institute of Accountants.

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MAY 1, 1934

TODAY'S MANAGEMENT PROBLEMS

By Norris M. Perris, Partner,
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MANAGEMENT has been so engrossed in code meetings that it has had little time to consider the effect that N.R.A. rulings will have upon specific management problems within the plant. My object, therefore, is to emphasize the changes in manufacturing problems arising from the operation of the codes and to point out suggested procedures which management may follow in meeting these newer conditions.

There are a great many points that might be stressed but because of shortage of time we will limit our discussion to four or five major problems affecting industrial management. Most of these new problems come from:

First:—The open price plan under which the majority of codified industries will be called upon to operate.

Second:—The labor provisions of the codes such as the imposition of uniform minimum wage rates and uniform maximum hours.

Third:—Other elements such as overheads, office management, cost procedures and bonus payments also must come up for review in the light of N.R.A. influences.

The Open Price Plan

As far as prices are concerned, the open price plan probably will result at best in two noteworthy tendencies. *Either* the tendency of all manufacturers to quote the same price whereby a few powerful factors will lead and thus determine the prices for the industry. *Or,* concerns will be in a constant price list war under which one enterprise will issue a list under his competitors which in turn will result in the other competitors doing likewise. An industry so disorganized as to find its price situation bungled in this manner will be worse off than those described above who work under the same price.

In either case the price established will probably be the one set by the most efficient concern because of competition from kindred industries, and because of consumer consciousness of value. This price will probably be based on the lowest cost. Concerns with

just fair business methods working in such a regime will find it difficult to operate at a profit.

When these codes really become operative, it will be a terrible shock to many companies upon learning that they are way out of line compared with the costs of their more efficient competitors. In the past, it was difficult to convince many managers of this because of the lack of available facts. When a competitor's price was lower many managers would assume that the other fellow was operating at a loss and would let it go at that.

From discussing the N.R.A. with a number of executives I find quite a common fallacy which holds that they will be able to pass their inefficiencies on to the consumer. A number of managers feel that even if their costs are high their competitors will "take them to their hearts" and raise the price level so that all may enjoy prosperity.

If this were true, there would be little need for this paper discussing management problems. Such action is contrary to industrial human nature, however, and to the normal competitive instinct of Americans. For the purpose of discussion, let us assume that you are the high cost producer in any industry and you realize that something has to be done to cut your costs. Thinking along such lines at once prepares you to meet more intelligently a price list war should you be so unfortunate as to be caught in one.

Open Prices and Material Costs

The effect of the open price on costs will be keenly felt in all of the cost elements, material, labor, overhead, and in sales. We mention material costs first not because it is of any more importance than any of the others, but because it can be disposed of quickly and accurately.

If all of us must pay the same price for our materials under the open price plan we will not be able to pass on to our materials vendor, reductions in our own selling prices as it has been done in the past.

Speculative buying in *anticipation* of a price rise will probably come back. Concerns will have to be accurate forecasters of the state of mind of their buying public. Accurate control of inventories will be vitally necessary as a slip either way in buying at

the wrong time, and in the wrong amounts, will preclude all thought of profits.

There are some economies that can be readily made on material costs. These wastes are usually the result of a lack of understanding of desired quality. It is surprising the lack of coordination between the sales and producing departments on quality. There is no definite understanding as to what is acceptable commercial quality. This results in two types of waste: First, the throwing out of spoiled goods which have a fair commercial value; second, the purchase of either too expensive raw material for the requirements of the product, or the purchase of inexpensive material on the basis that the first cost is the only cost.

Another source of waste in materials is a lack of concrete understanding between your vendor and yourself as to just what you want. The result is that you pay for something you do not get.

The solution of these difficulties lies in the willingness to write detailed specifications. Many concerns feel that well-defined specifications are an expensive luxury. In our estimation it is much less expensive for some one to sit down and define, within technical limits, the type of material that is wanted than to purchase "by guess or by God" and without any thought of quality standards. When clear specifications are used, you have complete coordination between your vendor, your manufacturing department, and your sales department. Our suggestion therefore is that you consider this matter of specifications in material buying as more important than ever.

Then, after defining these specifications it is important that you install the routine of testing a reasonable quantity of them in the laboratory. Those concerns which are not large enough to maintain chemical and physical laboratories will find in practically every large city a well-organized, inexpensive, commercial laboratory.

Another step here would be to pick out a few reliable sources of supply. If the price is to be the same for all vendors, why not give your business to the man who maintains uniform quality and service? Work close with him. Do not be afraid to call on him to explain your specifications. The idea that it is wrong to approach your vendor is just no good. It might have been in the

time when the vendors were apt to increase their price if you were a little too friendly, but with the check that you will have under the open price arrangement you have no fear from this source.

We would not mention this matter of specification if it were merely a theoretical matter. We can cite cases where highly technical products have been developed in laboratories of companies without the laboratory writing definite specifications as to what is required. We often find that as time goes on workers have made changes here and there in the process in making the final product. The result is that the final product is some distance away from the standard of quality that the original sample called for. This is common where there is a frequent turnover of personnel such as the case of female labor.

If your product is a technical one, how often has your concern checked up the bill of materials on the blueprint? Our own experience has been that it is worth while to check up the actual issues of materials with the bill of materials prescribed by the engineering department. You may think that you are doing this as a regular routine of your cost keeping, but if your experience has been like ours, you probably will find that because of word-of-mouth changes born in the shop that the materials you are giving your customer are more expensive than those listed on original requirements specified by the engineering departments.

Manufacturing Cost

Labor

The uniform minimum wage rates throughout the United States and the uniform maximum working hours of the labor provisions of the code are, without doubt, going to level off costs of production in a number of industries. No longer will one section of the country have geographical advantage over another section of the country due to the different wage rates and different working conditions.

One source of labor reduction which we hope passes into history, is the practice of indiscriminately cutting piece rates of an unusually fast worker. With employees being guaranteed an hourly rate, it will be impossible to reduce costs through outright changes of piece rates.

The only way that labor costs can be reduced will be through an intelligent and accurate technical analysis of the process or method. What are you doing to increase the effectiveness of your labor? Have you studied the many equipment auxiliaries that are on the market and which could be designed to enable your workers to obtain more production and hence reduce labor costs?

The coming of the codes has limited the improvement of labor costs to one all-important element—*better performance.*

What have you done to relieve the fatigue of the worker?

What are you doing to enable them to do the work for which they have been hired?

Are you providing them with tools and equipment that are proven to be of the best?

Have they been adequately instructed in the use of these tools?

These interrogations, because of the codes, are more insistently facing management than ever before.

Lack of Proper Instruction to the Worker

Much of the opportunity for labor cost reduction lies in intelligent foremanship.

In a number of industries the processes and equipment have changed radically from the day when the foreman received his trade training. While most foremen have attempted to keep up to date with new ideas on equipment, still the great preponderance of day-to-day routine prevents many a foreman from keeping up to date in the handling of production equipment. Similarly, the foreman's contact with inspectors, rate setters, planning clerks, etc., take so much of his time that he ceases to be the authority on the technical process that his position calls for.

Furthermore, the modern form of organization which tends to take from the foreman much of the work in shop engineering that he used to do in the early days, tends to handicap the foreman in this direction.

In a recent study of a medium-size corporation it was noted that the shop employees were practically untrained in the handling of modern and expensive pieces of equipment costing upward of $30,000. Furthermore, none of the foremen or superintendents had had much experience with this new equipment other than

word-of-mouth information received from the manufacturer. In plain words, there was not a real practical man on the job. The solution of this problem was to obtain a practical mechanic who was installed in the organization as a special instructor. The man employed was not chosen for his leadership but for his knowledge of the process.

We find that moving pictures showing the various operations of the process is one of the best means of eliminating waste. Foremen show a great deal of interest in these moving pictures and a great willingness to attend as many as three and four such evening meetings a week. At these meetings we throw on the screen the process as it is done now, stopping the projector and reversing it at various intervals to demonstrate some waste effort. This arouses the spirit of suggestion. Our own work has been greatly facilitated by these suggestions. Then, when we are ready to try out these ideas in the plant, the foreman knows what we are driving at and assists in the training of the employees to do the work a new way.

We also take movies for the purpose of instructing new help. We find in seasonal industries, particularly those using female labor, that the season is about one-half over before the best or standardized method is known to the worker. As we all realize that there is a great turnover in female labor, this training is of great assistance. In this case we give the newcomers a special review of the picture of the process, operating it slowly and at the same time pointing out the motions which she will be expected to follow.

Effect of the Depression on Skilled Labor

In addition to the labor provisions of the N.R.A. we have encountered a most startling fact during the last four or five months. While there are estimates of the number of unemployed at ten million, certain of our friends have been unable to fill their shops with labor during the recent upturn. In some localities there is insufficient skilled help available to meet the provisions of the maximum working hours. This is, of course, the outcome of the depression. A period of four years, with death and other causes removing our skilled hands, has left us in some localities without our usual labor market. The absence of apprentice schools

in the highly skilled trades during the period of the last four years is a contributing cause.

Where this situation prevails it is necessary to go more and more to the group method of manufacture. It is probably the best way of spreading the skilled help available over the working force. Heretofore it was generally economical to have the skilled help do some unskilled operations. Today it is becoming more and more necessary to keep skilled help at skilled work only. Thus we must re-arrange the process so as to use a certain amount of new help mixed with the skilled.

Never have we had so much layout work as in the last few months. Practically every assignment requires re-arrangement of the process in order to obtain a lower labor cost and to meet deliveries.

Machinery and Equipment

At this point we would like to make a prophecy. This prophecy is that we will probably solve this question of lower costs in the way we have in other depressions——*and that is by the installation of new equipment.* It is our thought that we will probably see wonderful development in the way of designing machinery and a consequent lowering of unit prices.

To substantiate my prophecy, let me call your attention to two recent facts. Did you notice the boom in the sales of textile equipment during the summer of 1933? It probably was the first real boom in that industry since the World War although I have not the facts at hand. Where did the textile industry turn for the solution of its problems if it was not to the textile machine industry?

Another instance is the number of machine tools sold the automobile trade during the last six months of 1933. The automobile industry received permission to operate on an exception to their code because they could not obtain sufficient help for their usual peak load. They turned likewise to the machinery industry for solution of one of their major problems.

Much of your equipment is not only obsolete in design and should be replaced, but your present equipment can be made to operate more efficiently through the use of jigs, fixtures, holding devices, etc. I have already mentioned the need for small appli-

ances to be added to existing equipment to bring them up to modern efficiency.

Payment of Capital Goods

If some one could work out a plan for the payment of these new machines so as not to cause a greater degree of unemployment, he would contribute much to the solution of our present-day problems.

In the past it has been customary to pay for new equipment by the lay-off of employees. In other words, equipment has always been sold on the basis of how many people it would replace. This has led to the much discussed technological unemployment. Many books have been written on this subject and we hesitate to attempt to add anything to the subject.

If capital could see its way clear to assume the payments for this equipment until such time as the sales market is able to absorb this increased output through lower prices, this would overcome the matter of unemployment, and machinery and equipment would take its proper position in bringing about recovery.

General Overhead

General overhead under N.R.A. influences can be discussed under two major topics:

A. The salaries and compensation of minor and major executives.

B. The expenses of operating the administrative and sales office routine.

Salaries vs. Bonus

The recent upturn in business has placed squarely before most companies the need for raising salaries. The cuts given executives have reduced their state of living far below what the company would like to have them maintain. Every executive realizes that salary cutting during the depression was demoralizing.

To overcome this, there is a real desire to reward faithful employees in some way. If the company gives them a raise in salary, however, and we should have a financial setback, the management stands a chance of being censored by the stockholders. On the other hand, the recent upturn has caught most industries short-

handed and the extra work has fallen in the laps of those who took the brunt of the financial depression.

We believe that it is better to leave salaries at the present level and to pay instead of salary increases, keyman bonuses to all minor and major executives. Then, if results are obtained, you are only obligated to pay the bonus. If the upturn continues without a setback, you will be rewarding your associates proportionately.

On the other hand, should we have a setback in the latter part of 1934 or during 1935, you will not have the financial problem of carrying a high overhead cost through the setback. Similarly, you will not have the demoralizing effect of a salary cut on top of a recent advance. No one accurately knows what the future holds. A bonus will enable you to handle this uncertainty with a minimum of risk. Furthermore, through the use of bonuses you are in position to *keep your fixed cost low* which is essential under the open price operation of many codes. It also results in a profit at a fairly low level of sales.

General Overhead Expense

Office

Those of you in charge of offices will be "between two fires." On one hand you will be pressed hard for reduction of office costs. On the other hand, you will be required to keep constantly available statistics for your trade association.

My general remarks which are to follow on office routines are designed to enable you to accomplish both of these objects. Trade association statistics should be a natural by-product of your usual sales and accounting statistics. Without extra effort on your part you should be able to readily compile this information without increase in cost.

Your office personnel and methods no doubt have been cut to the very minimum during the depression. You controllers and cost accountants should help your management in continuing to keep this item of office overhead at a minimum. On the other hand, I can hear you say that our code requires this or that group of statistics. One minute your employer will be calling for some new information that he requires for his trade association, and the next minute wanting to know why you hired this or that person. I can

understand both sides of this picture. On the other hand, there is much to be done in the reduction of office costs. While the last word in productive efficiency has not been reached in shops, 30 years' intensive study have seen some remarkable developments. This is not true either of office costs or of distribution costs.

The decade after the World War resulted in a development in the use of records and other office routines. Whether it is good or not in your particular case, depends entirely on its usefulness. If it enables somebody to make a "money-making decision" it is worth while; otherwise, it is not.

Many office routines are altogether too cumbersome for their purpose. I shall call your attention to a few routines that are done today which might be simplified.

There is little need for many of the special analyses that are made in many organizations. If you have efficiency charts on labor, a budget check-up of expense, yield record, and a cost of sales analysis by major lines, in general you probably have all the analyses that the keymen of an organization will want.

In deciding what statistics to give executives you are governed more by the background of the executive who is going to read them than anything else. You have to bear in mind that the majority of executives are not figure-minded, and too many figures are a burden. Another good rule to follow is that no analysis should be made unless it is going to lead to a definite decision to do some tangible thing. This may sound as an obvious fact but many cases can be cited where line executives receive so much in the way of special analyses that they have no time to do any thinking on their own work. I know of one organization in particular where there are five expensive people, making out special analyses and memorandums on costs and sending them to line executives who do nothing about it.

Something as chronic as this continuous analysis, is the idea of typing departmental correspondence. There is altogether too much typing in the average office. I revolt against the spirit of the interdepartment letter which is frankly a desire on the part of one person in an organization to pin something on the other.

Another source of office waste is the permanent record. The general attitude is that this and that record is necessary because of the possibility of a law suit. When you realize how rarely this

comes up and how efficiently the original sources of information can be adequately used, there is little reason for copying them on permanent records.

Cost Accounting

If you have a true set-up of standard costs there is no need for much of the work that is done on budgets. I have reference to the usual budget meetings where the various executives gather about the table to make up a budget for the ensuing period. Please excuse me if I appear a bit critical on usual budget procedure. Most budgets that I have reviewed are the result of a general "guessing contest" coupled with some expert compromises dominated by the most political-minded elements of the organization. You would not call in a group of workers and have them review some past performance figures and set a standard of output by a general discussion between several workers, particularly when only one worker of that department is involved in the discussion. Yet, that is precisely the way a great many budgets are set. A general conference is held wherein the sales manager comments on the production budget, and the works manager discusses with little concrete information the amount of money spent by the sales department.

A budget to be a real budget should be set on careful standards of every element of cost. Then, *if you have that, you have a standard cost system,* and frankly, *if you do not you have not a standard cost system.* Many that pass for standard costs are arbitrary estimates and in our estimation these are worse than no costs at all because there is no background of exact data to back up these arbitrary estimates. Then, in a discussion of variations in costs there is nothing to back up the assertions of the cost accountant, and thus his work is in vain.

Uniform Cost Plan

The codes have called for a uniform cost plan in most cases with the stipulation in general, "not to sell below the cost of production." There is a great deal of dynamite in those words if they were to be taken literally. Our suggestion to you is, as the controllers and cost accountants of your company, that you intensively study any uniform cost plan that is suggested to you. Make a par-

ticular note of anything that is said there about normal volume, distribution of general factory, handling of any engineering or creative design, etc.

We can sum up our thoughts here by saying that be very careful before you approve a uniform cost accounting code that it does not "price you out of your market."

Office Equipment

We probably should not leave this matter of office costs without a word or two about office equipment. Without exception the manufacturers of office equipment have done a remarkably fine piece of work. Where office equipment falls down is in its lack of proper utilization. This is because the routine of operating the office is not effectively tied up to the equipment.

We know of one case where a fine installation of office equipment was permitted to stand around idle because no one had given intensive study to a proper way of getting up list prices, so that this equipment would receive valuable use. If you are merely going to have the equipment around at the general discretion of various members of the office force, the chances are that much of the valuable investment in office equipment is worse than useless.

Sales

Probably the greatest influence of the open price code will be on the operation of the sales force. The drive for volume at any price is probably over, as far as the open price codes are concerned.

Any expansion that you might be able to obtain at the expense of your fellow competitor will be on the basis of better quality of product and a higher class of salesmanship. We will discuss the matter of better salesmanship a little later on.

New Products

Let us first discuss the place that new products are going to play in the development of sales. There will be a greater field for the concern that is willing to develop their business through new and up-to-date products.

Many codes have specifically given protection on designs. You do not know how important this part of the code is, if it can be properly policed. We have always felt that it was decidedly unfair

for one concern to appropriate certain designs in new products of their competitors and sell them at a lower price because they never spent any money in developing the original design. Otherwise, honest, church-going, business men who would hesitate to steal a penny, would not hesitate to lift a design from their competitor. The code holds out much future for that intelligent, fearless pioneer which every industry knows. In the future "letting George do it" is going to help George rather than his competitors, as we are sorry to say has been the case in the past.

Intelligent Selling

The codes will probably sound the death knell of the high pressure, sharp tactics form of salesman. His end started over 15 years ago and was about completed during the depression.

While the personal touch in salesmanship will always be with us, the intensive drive for profits will make it imperative that the business go to the salesmen who can help us with our own manufacturing and selling problems. The technical type of salesman who has made a most intensive study of his product, will come more and more to the front. Buyers will want to use the vendor's salesman as a reliable source of sound facts. Concerns which have not bothered to give their salesmen this intensive training in the use of their products, had better do so.

For a number of years we have discussed the matter of distribution costs and usually attempted to solve it by making a drive for volume. Now, with selling being on an entirely different plane, the solution of this problem of lower distribution costs and higher profits will probably come from a better selection of the potential market.

It will be the part of every sales manager to intelligently select his market on the assumption that he has a limited volume at his disposal. This is more of an advantage than one realizes. With a reasonable known volume to be secured, the sales manager can arrange the coverage of the territories most effectively. He should attempt to do business with the types of concerns which fit in nicely with the policies on quality and service that he is prepared to give.

Similarly, the salesman should adjust himself to a type of sales presentation which will fit the particular section of the market that

he is canvassing. He will have the time to become more intimately acquainted with his customer's requirements. He should be a great advantage to both his customer and to his own concern, in the transmitting of correct information so as to eliminate much of the waste which finds its way into that very prominent account "less returns and allowances."

This is not an abstract idea by any means. Review of several companies during the depression period has led us to make the rather rash statement that many concerns fail due to the fact that their salesmen are not thoroughly trained in the art or process in which their products are made. Let me cite one case to illustrate. A printing or lithographic salesman should thoroughly understand the psychology of color. Considerable money has been expended to demonstrate the sales appeal of various colors and their arrangement. Much advertising is wasted through this lack of understanding of the printer's art by the salesman selling it.

Our mention of the printer is just one of many trades. We can cite examples in the machine tool business, in the electrical field, as well as in such non-technical fields as food, etc. In the latter the inability of the company through its salesmen to emphasize attractiveness of the package as a customer appeal, is a general failing.

Finance

Before summarizing, may we just take a minute to make a statement on the matter of dividends. To date there has not been a concerted action on the part of stockholders to demand that something be done for them. A number of concerns, however, are showing substantial profits at reasonably low levels of sales.

We should not lose sight, however, of the fact that such a demand for dividends might arise at an inconvenient time. In the mind of every executive, therefore, should be the thought as to the best way of splitting the benefits of the upturn in business between stockholders and employees, both of whom have suffered tremendously during the last few years.

Summary

We believe implicitly in the N.R.A. and its various codes, whether operating under the open price or any other plan.

We are sincere in saying this because those of us in the management engineering profession have deplored for years the ability of individuals to prosper through no contribution of their own, but due to the intelligent and concentrated effort of their competitors who have given unstintingly of their money and their time in developing the industry to the point of where it is today.

We hope that the codes will put an end to that type of competitor who has never pioneered or attempted to develop an art or industry, but has lived as a parasite, politely appropriating that business which is the result of another man's brains and effort.

We hope it is the end of the type of business man who has resorted to unfair labor methods to reduce his costs. We hope it is the end of the business man who is unfair in the dealings he has with his vendors. We hope it is the end of the business man whose product is misrepresented and unreliable.

We feel, however, that it is going to reward that courageous individual who stands for advancement in science, advancement in his relationships with his employees, and with those serving him with materials. Business can and should be a happy relationship leading to the highest human welfare. The measure of success of any company should be its contribution to the welfare of its community.

JUSTIFYING PLANT INVESTMENTS

**By David R. Anderson, Chief Accountant,
The Kendall Company, Walpole, Mass.**

ON OR about October 2, 1933, the proprietors of every manufacturing enterprise in the United States classified as a unit of the cotton textile industry were notified that under the law of the land they were no longer at liberty to follow their own pleasure and their own business judgment in installing additional productive machinery in their plants. An amendment to the cotton textile code, suggested by the industry itself and approved by the Administrator of the National Recovery Administration on that day, requires that every such enterprise shall:

(1) register with the code authority a certified inventory of its productive machinery in place on October 1, 1933,

(2) report to the code authority monthly any installation of additional productive machinery, new or secondhand, and

(3) secure permission from the National Recovery Administration, through the code authority, before installing any additional productive machinery, except for replacement and balancing of operation of existing machinery.

The amendment also provides for examination by the code authority of the circumstances of and reasons for any such proposed installation, and for recommendations by the code authority to the Administrator as to the granting or refusing of the application.

Even in this era of rapid evolution in economic thought and practice, this development is unusual enough to warrant more than passing consideration of its significance and implications. It is clear that the industry, in accepting this drastic restriction, has recognized, in a definite and practical way, that adding to a productive capacity which is already far in excess of any reasonably visible market is unhealthy for the industry as a whole, and that what is unhealthy for the industry is, ultimately, unhealthy for all its members. It is not surprising to find the cotton textile industry taking the lead in this respect when one remembers that textile mills have been battling with the problems of depression since long before the general debacle of 1929. Excess capacity, while not the sole cause of the shrinking profits of the industry over a long

period of years, is beyond doubt one of the major basic causes, and in placing this check on further expansion the industry is acting purely in self-interest—in fact, it can truthfully be said, in self-preservation. But it is certain that this step would not be supported by law if its only justification lay in the preservation of the profits and equities of a limited group of owners. The law and public opinion support this kind of action only because the people, rightly or wrongly, have come to believe that the free play of unrestricted competition, as so perfectly exemplified in the history of the cotton textile industry since the World War, does not, in the long run, react to the advantage of the wage-earner or the consumer, any more than to the advantage of the owner. Without attempting here to analyze the soundness of that belief, we can accept the probability that control of productive capacity, either by direct action, as in this case, or indirectly through more careful regulation, public or private, of the extension of credit, is definitely "on the cards" for the immediate future, and, unless there is a sharp reversal of present trends, may eventually become a permanent feature of our national economy.

It is not necessary, in accepting the reality of this development, to assume that we are about to settle down to a prolonged era of stagnation at our present level of mechanical efficiency, and that technical progress and improvement in the arts of manufacture are to be halted or discouraged. It is natural, in times like these, that the emphasis should be on better distribution of the fruits of progress already made, but as this better distribution is achieved, the way should naturally tend to open for further technological advances, and there is nothing in the philosophy of the New Deal that indicates an intention to block this natural tendency. Perhaps the pace of progress may be slowed, to permit of its assimilation without dislocating the economic system, but if so the results, while less spectacular, may be more healthful in the long run.

We may expect, however, that as control of productive capacity is established and extended it will tend to be applied to prevent expansion or replacement of existing equipment except where economically justified. The most practical test of economic justification, under our present order, is profitableness; at least, if it can be demonstrated with reasonable certainty that a proposed investment will over a period of time yield a fair profit, there is a strong

presumption that it is economically sound. What we are really saying, therefore, is that before making heavy expenditures for plant and equipment the business man will have to estimate carefully and intelligently the profit he expects to make on his investment. We have already learned during the depression to discount many factors which have at times in the past played a large part in the making of such investments, and to apply more realistic tests. Sales enthusiasm, the natural desire for expansion and a more or less indiscriminate belief in salvation through labor-saving machinery have become less and less acceptable as substitutes for an intelligent study of the profit possibilities of each proposed investment, and we can expect this to be increasingly true in the future. Such a study of profit possibilities cannot from its very nature be entirely factual, and in many cases the element of judgment will largely predominate, but in all cases both fact and judgment can and should be expressed in terms of figures, clearly set forth and interpreted. In the preparation of such a statement the controller or the accountant, whatever his title may be, can render a major service, and it is the purpose of this paper to suggest in outline the main points which a statement of this kind should cover and to summarize, with illustrations, the principles underlying the factual computations which will ordinarily be included.

Replacement

The simplest problem is that of the replacement of existing machinery with improved equipment for the purpose of securing a lower manufacturing cost by savings in labor, power, or other direct expenditures, *without any increase in total salable output*. The information required to pass intelligently on a proposed installation of this kind may be summarized as follows:

1. Cost of new equipment, including invoice cost of machine, freight, and installation costs.

2. Cost of removal of equipment replaced, and cost of rearrangement and revamping of building, power transmission, piping, and other service facilities, made necessary by installation of new equipment.

3. Amount to be realized from sale of equipment replaced.

4. A detailed manufacturing cost statement, showing the dollars of annual expenditure for each element of cost, the annual production and the total unit costs, both before and after the proposed installation.

Although the accountant will rarely be able to certify personally to the accuracy of all these data, he will usually be in a position, because of his familiarity with factory operations and costs, to form an opinion as to their reliability. If possible he should assume the responsibility for carefully scrutinizing the figures submitted, particularly the estimates of savings in direct expenses, and discussing them with the persons responsible for their preparation, to be sure that everyone participating in the estimates has a clear conception of the whole project and has given due consideration to all angles of the problem. Naturally the extent of the accountant's investigation of these basic data will be determined by the organization of responsibilities in his particular company, but if the responsibility for the presentation of the complete picture is in his hands, he is the natural person to act as coordinator of all work on the problem.

For convenience in discussion, let us call the sum of items 1. and 2. less item 3. in the tabulation of required information above the "investment," and let us call the saving in total annual direct expenditures (i.e., all expenses except depreciation and interest), as shown in the manufacturing cost statement, the "annual out-of-pocket gain." It will be noted that the "investment" as here defined includes both items which are usually capitalized on the books and items which, in conservative accounting at least, are charged to expense; it is in fact, the net cash outlay rather than the capitalized cost of the new equipment. Now, to follow through a simple illustration of a problem of this kind, let us assume a proposed installation of equipment with a total cost, including freight and installation, of $60,000, replacing equipment which some years before cost a like amount and is still in good running order, but, due to the greater efficiency of the new equipment, now has a resale value of only $5,000. The cost of removing the old equipment and revamping the machine service facilities will be $15,000, of which $5,000 is considered a part of the installation cost and is included in the $60,000 to be capitalized, while the remaining

$10,000 is to be charged to expense. The manufacturing cost tabulation shows a substantial reduction in labor cost and total cost, as follows:

	Present	*After New Installation*
Annual Expenses:		
Labor	$12,500	$ 3,000
Supplies, Repairs and Power	4,000	3,500
Taxes, Insurance and Miscellaneous	900	900
Total before Depreciation and Interest	$17,400	$ 7,400
Depreciation (10% on $60,000)	6,000	6,000
Interest (6% on $60,000)	3,600	3,600
Total	$27,000	$17,000
Annual Production—units	500,000	500,000
Unit Cost	.054	.034

The annual saving of $10,000 and the reduction of 37% in unit cost are impressive, and superficially would seem to warrant the $60,000 investment in the new equipment. But a consideration of the effect of the purchase on profits gives a somewhat different picture. The present equipment is already the property of the company and any value remaining on the books must ultimately be charged against earnings, either by a direct write-off if the equipment is sold or scrapped, or through annual depreciation charges, if it is continued in use. The purchase of the new equipment, therefore, will increase the total charges against earnings over a period of years by the amount of the depreciation and interest on the new equipment, and will not relieve the earnings account of any charges on the old equipment, except to the amount of its resale value. From this it follows that, for a machinery replacement to show a profit the savings in direct expenses (i.e., expenses before interest and depreciation) must more than cover the entire depreciation and interest on the cost of the new instal-

lation, and that the fixed charges on the old equipment do not enter into the calculation. The following calculation presents the true picture:

To determine the average annual net gain on the proposed installation, deduct from the "annual out-of-pocket gain," as defined above:

1. Annual depreciation on the total "investment," as defined above, at the standard depreciation rate for the new equipment, and
2. Annual interest at 6% on one-half the amount of the total "investment" (one-half of the gross investment being the average investment over its useful life).

Following this formula in the illustration given we have the following computation:

Investment:		
Cost of new equipment, including installation		$60,000
Revamping expenses and removal of old equipment		10,000
		70,000
Less—resale value of old equipment		5,000
Investment		$65,000
Annual out-of-pocket gain ($17,400 less $7,400)		10,000
Less: depreciation on "investment," at 10%	$6,500	
interest at 6% on one-half of "investment"	1,950	8,450
Average annual net gain		$1,550

The true annual gain in profits of $1,550 compares with the $10,000 gain shown by the manufacturing cost computation, and puts a different aspect on the proposed investment. With the uncertainties usually attendant on the realization of estimated savings in proposals of this nature and the possibilities of further development in the art or discontinuance of the particular product

made on this machine, the management may well decide to continue with the present equipment. But what about the manufacturing cost? Can we continue to charge the sales department .054 per unit, when new competition can manufacture at .034, and expect sales to be maintained at the usual margins? If we analyze the facts we see that what has happened is that the company has, because of progress in the art of manufacture, suffered an obsolescence loss equal to the entire value of its old equipment, and that if costs are to be computed on a competitive basis the accounts must be adjusted to reflect this fact. If the book value of the old equipment be charged off, thus recording the loss actually incurred and eliminating depreciation and interest charges on equipment which no longer has a real value in use, we will have a true current cost which will be closely in line with the cost obtainable with the new equipment.

Additional Manufacturing

A variation of the above problem occurs when the proposed installation of equipment is not a replacement, but is for the purpose of manufacturing some semi-finished material formerly purchased from outside vendors. The "annual out-of-pocket gain" in this case is the difference between (a) the estimated annual cost of the raw material if purchased outside and (b) the estimated annual out-of-pocket cost if manufactured, including raw material cost plus all manufacturing expenses except depreciation and interest. From this "annual out-of-pocket gain" depreciation and interest on the "investment," computed as in the preceding illustration, must be deducted to arrive at the net annual gain. This case is somewhat simpler in one respect since there is no factor of fixed charges on old equipment to confuse the issue, but it is more complex in that it involves estimating material cost and vendors' profit margins, as well as manufacturing costs, on a product which may be outside the range of the company's direct experience. Presumably a proposal of this nature will not be considered unless some experimental work has been done giving a basis for material and manufacturing cost estimates, and if a significant investment is required, amounting to a major expansion of the company's manufacturing processes, such experiments will preferably be on a factory scale rather than mere laboratory tests. If

the computation shows a large gain on the installation, amounting to more than a normal return on the investment, there are obviously only two possible explanations—either the estimated costs are lower than the outside vendor's costs, or the vendor's profit margins are unduly long. In the absence of a known advantage due to improved processes or greater efficiency, the conservative course is to be skeptical of an estimated manufacturing cost lower than that of a vendor who may be expected to have greater experience on the particular product. Investigation may show that the estimated cost of material purchased from the vendor is based on prices and margins prevailing under unusually favorable conditions, and that the average margin between the vendor's selling price and the raw material cost over a period of time has been much lower than assumed in the computation. Or, if the vendor has succeeded in maintaining high margins an intimation to him of an intention to manufacture the material may be effective in securing a reduction in the purchase price. All of these angles need to be carefully considered before reaching a conclusion that a proposed installation of this kind will actually be profitable.

Increase in Salable Output

A still more difficult problem is presented when a proposed plant addition or replacement involves an increase in saleable output. In such a case it is necessary, in estimating the effect of the proposed installation on earnings, to consider how the increased output is to be disposed of and to estimate the sales income which will be derived therefrom and the additional distribution costs which will be incurred. Situations frequently occur in which it is possible to effect a saving in unit factory cost by increasing the output without a proportionate increase in total manufacturing expenses, but such a "saving" will be actually realized only if there is a market to absorb the additional output at a price which will yield a profit. The best demonstration of the existence of such a market is, of course, the slow and steady growth of the sales of the product over a period of time, and where the additional capacity is for the purpose of keeping pace with such a growth the risks of expansion are minimized. But if the increase in business is expected to result from reduced selling prices which are to be made possible by the lower manufacturing costs,

the problem is full of pitfalls and requires thorough market analysis and expert market judgment. Market analysis is not a part of the accountant's responsibilities, and the subject is beyond the scope of this paper, but it is certainly the accountant's duty to stress the possible effect of the proposed increase in output on the market and on the competitive situation as a factor in estimating the degree of risk involved in the proposed investment. He can also emphasize in his presentation the extent to which market judgment is involved, and cite the authority for the various estimates on which the computation of expected profits is based. The form of the computation itself will vary with the type and complexity of the problem, but the factors to be included may be summarized as follows:

1. Details of the required "investment," and a comparative statement of manufacturing costs, corresponding to items 1., 2., 3. and 4. in the preceding illustration.

2. A statement of the estimated unit margin available for manufacturing expenses and profit, i.e., the difference between estimated selling price and estimated raw material cost. In making this estimate it is necessary to consider not only current actual margins, but also the history of competitive margins over a period of time, and to weigh any evidence of new factors, such, for example, as the limitation of operation of productive machinery under the N.R.A., which may have a bearing on future market conditions.

3. A statement of the additional selling and administrative expenses which it is estimated will be necessary to dispose of the increased output.

4. A computation of the estimated annual out-of-pocket gain and average annual net gain, on the basis of these data. The following comparatively simple problem of this type will illustrate the principles of this computation:

Cost of new equipment, including freight and installation	$100,000
Cost of removal of equipment replaced, rearrangement and revamping, etc., to be charged to expense.....	15,000
Amount to be realized from sale of equipment replaced..	5,000
"Investment" (by definition).....	110,000

Statement of Manufacturing Costs

	Present		*Proposed*	
Annual Expenses:	*Dollars*	*Per Lb.*	*Dollars*	*Per Lb.*
Labor	$120,000	.0600	$135,000	.0540
Supplies, Repairs, Power	80,000	.0400	95,000	.0380
Taxes, Insurance and Miscellaneous	20,000	.0100	20,000	.0080
Total Before Depreciation and Interest	220,000	.1100	250,000	.1000
Depreciation	40,000	.0200	45,000	.0180
Interest	30,000	.0150	33,000	.0132
	$290,000	.1450	$328,000	.1312
Production	2,000,000 lb.		2,500,000 lb.	

Estimated Manufacturing Margin:		
Present		.1500
Proposed (allowing for reduction of ½¢ in selling price)		.1450
Estimated Additional Selling and Administrative Expenses:		
Commissions	$5,000	
Branch Office Sales Expense	2,000	
Billing and Miscellaneous Administrative	1,500	
	$8,500	
Annual Out-of-Pocket Gain:		
Gross Income Less Raw Material Cost:		
Present 2,000,000 lb. @ .1500	$300,000	
Proposed 2,500,000 @ .1450	362,500	
Increase		$62,500
Less: Increase in Manufacturing Expenses Before Depreciation and Interest (see above)	$30,000	
Increase in Selling and Administrative Expense	8,500	
		38,500
Annual Out-of-Pocket Gain		$24,000

Average Annual Net Gain:		
Annual Out-of-Pocket Gain, (as above)		$24,000
Less: Depreciation on "Investment," at 10%	$ 11,000	
Interest at 6% on Average Investment (equal to one-half of gross investment)	3,300	14,300
Average Annual Net Gain		$ 9,700

A very effective figure for making clear the relation of savings to investment in any of the above problems is the "time required to pay out." In the two illustrations given above this figure is computed as follows:

First Case:	
Annual Out-of-Pocket Gain	$10,000
Less: Interest at 6% on Average "Investment"	1,950
Average Annual Return of Principal	$ 8,050

$$\frac{\text{Investment}}{\text{Average Annual Return of Principal}} = \frac{65{,}000}{8{,}050} = 8.1 \text{ years, time required to pay out, with interest at 6\%}$$

Second Case:	
Annual Out-of-Pocket Gain	$24,000
Less: Interest at 6% on Average "Investment"	3,300
Average Annual Return of Principal	$20,700

$$\frac{\text{Investment}}{\text{Average Annual Return of Principal}} = \frac{110{,}000}{20{,}700} = 5.3 \text{ years, time required to pay out, with interest at 6\%}$$

Conclusion

In conclusion, it should be emphasized that in problems of this kind figures and calculations can never tell the whole story and in many cases may not be the determining factor in a decision. An investment which shows a loss after the 6% interest charge may

be desirable for the purpose of improving or controlling the quality of the product. Sometimes the possible savings on a new type of equipment may not be susceptible of proof except by actual trial on a large scale, and the concern which is too cautious may find itself left behind in the march of progress. Furthermore, the company's financial position will largely determine the degree of risk it can safely assume, and the availability of funds and actual interest costs will often influence the decision, particularly in border-line cases. Nevertheless, the fact remains that an intelligent decision cannot be made in any case without a clear picture of the probable effect of the investment on earnings, and the presentation of this picture is an important duty of the accounting officer.

SUGGESTED BIBLIOGRAPHY

INDUSTRY—GOVERNMENT REGULATION

N. A. C. A. Publications:

Selling Below Cost Provisions in Industrial Codes. Bulletin I, Jan. 15, 1934.

Essential Elements of Cost for Uniform Accounting Under the N. R. A. Bulletin I, Dec. 15, 1933.

National Industrial Recovery Act and What It Means to the Accountant. Special Publication, June 23, 1933. (Part of 1933 Year Book.)

Outline of the Practical Application to Industry of the Proposed N. R. A. Bulletin I, June 15, 1933.

Outlook of Uniform Accounting under the N. R. A. Bulletin I, Aug. 15, 1933.

Progress of the N. R. A. Bulletin I, Nov. 15, 1933.

Provisions of Industrial Codes and Agreements. Bulletin I, June 15, 1933.

Summary to Proposed N. I. R. A. Bulletin I, June 15, 1933.

Trade Associations and the New Deal. Bulletin I, Aug. 15, 1933.

General:

Accounting in Relation to the Formulation of Industrial Codes. Excerpt from New England News Letter. New England Council, Statler Bldg., Boston, Mass. July, 1933.

Forms Developed in Dealing with Institutes Which Have Established Systems of Reporting under their Codes. Planning & Research Division, National Recovery Administration, Washington, D. C.

Price Control Devices in N. R. A. Codes. Brookings Institution, Washington, D. C., 1934. Pamphlet Series No. 11. 45 pp.

Crusade for National Recovery. Excerpt from The Yale Review, Yale University Press, New Haven, Conn., Sept., 1933.

Price Control Provisions of Codes. Chamber of Commerce of the U. S. 1933. 14 pp.

National Industrial Recovery Act. Central Book Company, 245 Broadway; New York, N. Y. 1933. 156 pp.

Effect of Industry Organization on the Individual Company. Stevenson, Jordan and Harrison, 19 West 44th St., New York, N. Y. 1933. 12 pp.

Codes of Fair Competition. National Assn. of Manufacturers, 11 West 42nd St., New York, N. Y. Aug. 18, 1933.

Addresses and Discussion Relating to the Federal Securities Act and Accounting Requirements under the N. R. A. New York State Society of C. P. A.'s, 30 Broad St., New York, N. Y. Oct., 1933.

Industrial Control and the National Industrial Recovery Act. Stevenson, Jordan & Harrison, 19 West 44th St., New York, N. Y. Nov. 28, 1933.

Labor Relation under the Recovery Act. Ordway Tead and Henry C. Metcalf. Whittlesey House, 330 West 42nd St., New York, N. Y. 1933. 259 pp.

Agricultural Adjustment Administration Act Passed by 73d Congress. Washington, D. C. 1933. 26 pp.

Government Competition with Private Enterprise. U. S. Govt.—Special Com. Report to House of Representatives. Washington, D. C. 1933. 253 pp.

Trade Associations and Industrial Control. Central Book Co., 245 Broadway, New York, N. Y. 1934. 237 pp.

Business Under the Recovery Act. Whittlesey House, 330 West 42d St., New York, N. Y. 1933. 314 pp.

OUR OPEN FORUM

Gentlemen:

The article in Vol. XV, No. 14, March 15, 1934, issue of the N. A. C. A. Bulletin, entitled, "The Flexible Budget and Standard Costs in a Business of Moderate Size," was very interesting to me. I had been working on an idea of that nature in a business which certainly comes under the classification of "moderate size."

Mr. Chubbuck's article gave me some good ideas and I believe it will develop in others the idea of trying a flexible or sliding budget in companies in which monthly sales are irregular and difficult to forecast.

I would like to note some additional ideas which may interest the author of the published article and other members who are "budget-minded."

Other Income: It so happens in our business that Non-Operating or Other Income runs from 10% to 25% of Operating Income and is therefore an important factor. It is commonly argued that any sources of income which might be classified as Non-Operating are so irregular and so independent in nature that they have no relationship to the operations of the business and therefore are meaningless and confusing on budgets and charts of operations. However, in industries in which raw material is a large factor in the costs and in which trade customs allow 1% and 2% cash discounts, the income from Discounts on Purchases should be included in a budget. An analysis of that account should show a fairly steady relationship between net discounts and purchases of raw materials. Such a rate can be applied to the raw material costs determined in the budget.

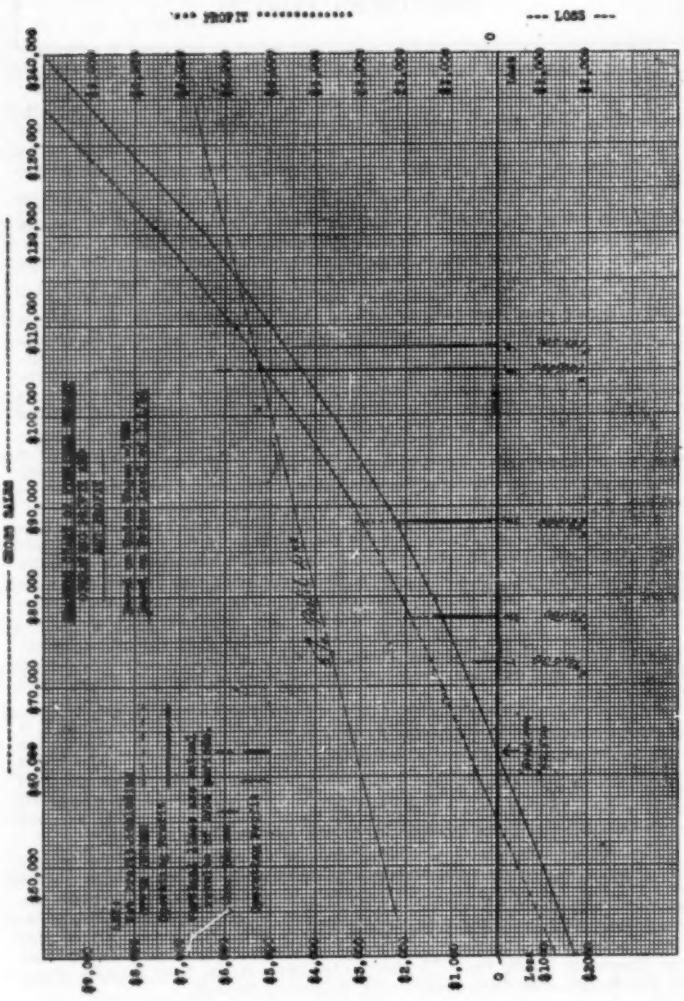
Sales of junk, empty containers, and salvaged material are a fairly regular source of income and increase in almost direct ratio to sales. In the baking business sales are almost synonymous with production as practically everything is baked on daily orders from salesmen and agents and each day's production is delivered within 24 hours. Therefore increases in sales and production mean more empty containers, etc., which are sold weekly.

Following out these ideas, other accounts in the Non-Operating group, such as Rents, Interest Earned, Profit on Sales of Capital Assets, etc., can be estimated and included in the budget, made on a sliding scale of sales or otherwise.

Graphic Charts: The best use can be made of the flexible budget if it is charted graphically, and then results of each accounting period added to the chart. A sample chart using imaginary figures is enclosed. This chart shows gross sales per period from $50,000 to $140,000 on the vertical lines from left to right. The horizontal lines are scaled for profit up to $10,000 from a base line of zero, or the "break-even" point. Below this line, the scale provides for losses down as far as the most pessimistic desire.

The various amounts of Operating Income as determined by the budget are charted on various sales amounts. These points are joined with a solid line showing the estimated profit for every conceivable amount between the amounts actually budgeted and plotted. Net Income, including Other Income should be plotted and the points joined with a broken or dotted line. This indicates at a glance that the higher line is more of an estimate than the Operating Profit line. Peculiarly, however, it has been actually closer to the budget than Operating Profit, in our experience.

If a 5% profit line or any other suitable percentage of possible expected profits is shown, it becomes easy to see what volume is necessary to earn various percentages of profit.


*** PROFIT ***
--- LOSS ---

The sample chart shows, like many will in practice, steadily increasing profit as volume increases, but in addition a slight curving upward of the line. This, of course, is due to the increased volume decreasing the importance of fixed overhead and a larger gross income being realized. The line of Other Income does not parallel the other but bends away from it, as the increased volume increases such accounts as Discounts on Purchases and Sales of Junk. The "break-even" point for operations is clearly shown in such a manner that even the least figure minded Sales Manager can grasp the significance.

Each period's results are plotted with vertical lines on the exact line of the actual sales. This shows at a glance the amount under or over the budget. The lines representing the periods are numbered or dated as they do not run consecutively from left to right unless it should happen that each period's sales exceeded the previous. In the sample chart the fourth period is shown exceeding the fifth in sales, but showing less profit. However, the fourth almost reached the budget lines while the fifth exceeded them. Such result would call for an analysis and comparison of the figures for the periods and the budgets. If the variance were due to one main factor or transaction, it might be noted on the chart. For example our chart for 1933 showed that the eighth period dropped far below the expected profit, although sales stayed up. It was the period in which N. R. A. wage increases took effect and material costs raised faster than we could adjust the selling prices on our goods.

An accountant can interpret figures directly but can do better and faster with the use of charts. There is the most important added advantage that figures and facts can be presented better to executives, by graphic methods.

Yours for better budgets,

RAEFORD BAILEY,

Chief Accountant, Mother's Cake & Cookie Co.

BULLETINS PUBLISHED SINCE AUGUST, 1933

Distribution Cost Analysis and Its Influence on Pricing Policy	September 1, 1933
Allocation of Distribution Expenses by Classes of Product by Use of Standard Rates	September 1
Some Controversial Phases of Standard Costs	September 15
The Cost Accountant as the Key Man in Shaping Policies	October 1
Production Control as a Remedy for the Depression	October 1
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Printing Cost Estimating for Price Setting	November 15
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Standard Costs for Machine Shops and Malleable Foundries	December 1
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Cost Accounting for Distillers of Alcohol, Gin and Whiskey	January 1, 1934
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Incomplete Budgeting	April 15
Profit Control in a Wholesale Paper Company	April 15
Today's Management Problems	May 1
Justifying Plant Investments	May 1

TENTATIVE PROGRAM
of the
TECHNICAL SESSIONS
for the
FIFTEENTH INTERNATIONAL COST CONFERENCE
in
CLEVELAND
on
June 25, 26, 27, 28, 1934

Tuesday—A. M.—June 26, 1934

The National Industrial Recovery Act
- (a) From the Standpoint of the N.R.A.
- (b) From the Standpoint of Trade Associations and Code Authorities
- (c) From the Standpoint of Industry

Tuesday—P. M.

Fundamental Accounting Problems Under the Recovery Program
- (a) Selling Below Cost and Price Control
- (b) Control of Plant Capacity and Limitation and Allotment of Production

Wednesday—A. M.

Problems in the Application of Uniform Cost Accounting Methods
- (a) Natural Resources
- (b) Manufacturing Industries
- (c) Trade and Distribution

Wednesday—P. M.
- (a) Use of Standard Costs Under the Codes
- (b) Problems of Statistical Reports Under the Codes

Thursday—

Open Forum, for the discussion of the effect on accounting procedures by reason of operation under the codes, and the discussion of questions and problems suggested by prior sessions. Questions should be presented in writing during the previous days.

HOW CAN YOU AFFORD TO MISS IT?